Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A light-emitting device, comprising:

a multi-layer stack of materials including a light-generating region and a first layer supported by the light-generating region so that, during use of the light-emitting device, light generated by the light-generating region can emerge from the light-emitting device via a surface of the first layer,

wherein the surface of the first layer has a dielectric function that varies spatially as a pattern, and at least about 45% of a total amount of light generated by the light-generating region that emerges from the light-emitting device emerges via the surface of the light-emitting device.

2. (Original) The light-emitting device of claim 1, wherein at least about 50% of the total amount of light generated by the light-generating region that emerges from the light-emitting device emerges via the surface of the light-emitting device.

3. (Original) The light-emitting device of claim 1, wherein at least about 60% of the total amount of light generated by the light-generating region that emerges from the light-emitting device emerges via the surface of the light-emitting device.

4. (Original) The light-emitting device of claim 1, wherein at least about 70% of the total amount of light generated by the light-generating region that emerges from the light-emitting device emerges via the surface of the light-emitting device.

5. (Original) The light-emitting device of claim 1, wherein the multi-layer stack of materials comprises a multi-layer stack of semiconductor materials.

6. (Original) The light-emitting device of claim 5, wherein the first layer comprises a layer of n-doped semiconductor material, and the multi-layer stack further comprises a layer of p-doped semiconductor material.

7. (Original) The light-emitting device of claim 6, wherein the light-generating region is between the layer of n-doped semiconductor material and the layer of p-doped semiconductor material.

8. (Original) The light-emitting device of claim 1, further comprising a support that supports the multi-layer stack of materials.

9. (Original) The light-emitting device of claim 8, further comprising a layer of reflective material that is capable of reflecting at least about 50% of light generated by the light-generating region that impinges on the layer of reflective material, the layer of reflective material being between the support and the multi-layer stack of materials.

10. (Original) The light-emitting device of claim 9, wherein the first layer comprises an n-doped material, the multi-layer stack of materials further includes a layer of p-doped material, and a distance between the layer of p-doped semiconductor material and the layer of reflective material is less than a distance between the layer of n-doped semiconductor material and the layer of reflective material.

11. (Original) The light-emitting device of claim 10, further comprising a p-ohmic contact layer between the layer of p-doped material and the layer of reflective material.

12. (Original) The light-emitting device of claim 1, further including a current-spreading layer between the first layer and the light-generating region.

13. (Original) The light-emitting device of claim 1, wherein the multi-layer stack of materials comprise semiconductor materials.

14. (Original) The light-emitting device of claim 13, wherein the semiconductor materials are selected from the group consisting of III-V semiconductor materials, organic semiconductor materials and silicon.

15. (Original) The light-emitting device of claim 1, wherein the pattern does not extend into the light-generating region.

16. (Original) The light-emitting device of claim 1, wherein the pattern does not extend beyond the first layer.

17. (Original) The light-emitting device of claim 1, wherein the pattern extends beyond the first layer.

18. (Original) The light-emitting device of claim 1, further comprising electrical contacts configured to inject current into the light-emitting device.

19. (Original) The light-emitting device of claim 18, wherein the electrical contacts are configured to vertically inject electrical current into the light-emitting device.

20. (Original) The light-emitting device of claim 1, wherein the light-emitting device is selected from the group consisting of light-emitting diodes, lasers, optical amplifiers, and combinations thereof.

21. (Original) The light-emitting device of claim 1, wherein the light-emitting device comprises a light emitting diode.

22. (Original) The light-emitting device of claim 1, wherein the light-emitting device is selected from the group consisting of OLEDs, flat surface-emitting LEDs, HBLEDs, and combinations thereof.

23. (Original) The light-emitting device of claim 1, wherein the light-emitting device is in the form of a packaged light-emitting device.

24. (Original) The light emitting device of claim 1, wherein the light-emitting device is in the form of a packaged die.

25. (Original) The light-emitting device of claim 1, wherein the pattern has an ideal lattice constant and a detuning parameter with a value greater than zero.

26. (Original) The light-emitting device of claim 1, wherein the pattern is a nonperiodic pattern or a complex periodic pattern.

27. (Original) A light-emitting device, comprising:

a multi-layer stack of materials including a light-generating region and a first layer supported by the light-generating region so that, during use of the light-emitting device, light generated by the light-generating region can emerge from the light-emitting device via a surface of the first layer,

wherein the light-emitting device has an edge which is at least about one millimeter long, and the light-emitting device is designed so that an extraction efficiency of the light-emitting device is substantially independent of the length of the edge of the length of the edge.

28. (Original) The light-emitting device of claim 27, wherein the length of the edge is at least about 1.5 millimeters.

29. (Original) The light-emitting device of claim 27, wherein the length of the edge is at least about two millimeters.

30. (Original) The light-emitting device of claim 27, wherein the length of the edge is at least about 2.5 millimeters.

31. (Original) The light-emitting device of claim 27, wherein the length of the edge is at least about three millimeters.

32. (Original) The light-emitting device of claim 27, wherein the light-emitting device includes at least one additional edge having a length of at least about one millimeter.

33. (Original) The light-emitting device of claim 27, wherein at least about 90% of the total amount of light generated by the light-generating region that emerges from the light-emitting device emerges from the light-emitting device via the surface of the first layer.

34. (Original) The light-emitting device of claim 27, wherein at least about 95% of the total amount of light generated by the light-generating region that emerges from the light-emitting device emerges from the light-emitting device via the surface of the first layer.

35. (Original) The light-emitting device of claim 27, wherein the multi-layer stack of materials comprises a multi-layer stack of semiconductor materials.

36. (Original) The light-emitting device of claim 35, wherein the first layer comprises a layer of n-doped semiconductor material, and the multi-layer stack further includes a layer of p-doped semiconductor material.

37. (Original) The light-emitting device of claim 36, wherein the light-generating region is between the layer of n-doped semiconductor material and the layer of p-doped semiconductor material.

38. (Original) The light-emitting device of claim 27, further comprising a support that supports the multi-layer stack of materials.

39. (Original) The light-emitting device of claim 38, further comprising a layer of reflective material that is capable of reflecting at least about 50% of light generated by the light-generating region that impinges on the layer of reflective material, the layer of reflective material being between the support and the multi-layer stack of materials.

40. (Original) The light-emitting device of claim 39, wherein the first layer comprises a layer of an n-doped material, the multi-layer stack of materials further includes a layer of p-doped material, and a distance between the layer of p-doped semiconductor material and the layer of reflective material is less than a distance between the layer of n-doped semiconductor material and the layer of reflective material.

41. (Original) The light-emitting device of claim 40, further comprising a p-ohmic contact layer between the layer of p-doped material and the layer of reflective material.

42. (Original) The light-emitting device of claim 27, further including a current-spreading layer between the first layer and the light-generating region.

43. (Original) The light-emitting device of claim 27, wherein the multi-layer stack of materials comprise semiconductor materials.

44. (Original) The light-emitting device of claim 43, wherein the semiconductor materials are selected from the group consisting of III-V semiconductor materials, organic semiconductor materials and silicon.

45. (Original) The light-emitting device of claim 27, wherein the surface of the first layer has a dielectric function that varies spatially according to a pattern that does not extend into the light-generating region.

46. (Original) The light-emitting device of claim 27, that does not extend beyond the first layer.

47. (Original) The light-emitting device of claim 27, wherein the surface of the first layer has a dielectric function that varies spatially according to a pattern that extends beyond the first layer.

48. (Original) The light-emitting device of claim 27, further comprising electrical contacts configured to inject current into the light-emitting device.

49. (Original) The light-emitting device of claim 48, wherein the electrical contacts are configured to vertically inject electrical current into the light-emitting device.

50. (Original) The light-emitting device of claim 27, wherein the light-emitting device is selected from the group consisting of light-emitting diodes, lasers, optical amplifiers, and combinations thereof.

51. (Original) The light-emitting device of claim 27, wherein the light-emitting device comprises a light emitting diode.

52. (Original) The light-emitting device of claim 27, wherein the light-emitting device is selected from the group consisting of OLEDs, flat surface-emitting LEDs, HBLEDs, and combinations thereof.

53. (Original) The light-emitting device of claim 27, wherein the light-emitting device is in the form of a packaged light-emitting device.

54. (Original) The light emitting device of claim 27, wherein the light-emitting device is in the form of a packaged die.

55. (Original) The light-emitting device of claim 27, wherein the surface of the first layer has a dielectric function that varies spatially according to a pattern with an ideal lattice constant and a detuning parameter with a value greater than zero.

56. (Original) The light-emitting device of claim 27, wherein the surface of the first layer has a dielectric function that varies spatially according to a pattern that is a nonperiodic pattern or a complex periodic pattern.

57. (Original) A light-emitting device, comprising:

a multi-layer stack of materials including a light-generating region and a first layer supported by the light-generating region so that, during use of the light-emitting device, light generated by the light-generating region can emerge from the light-emitting device via a surface of the first layer,

wherein the light-emitting device has an edge which is at least about one millimeter long, and the light-emitting device is designed so that a quantum efficiency of the light-emitting device is substantially independent of the length of the edge of the length of the edge.

58. (Original) A light-emitting device, comprising:

a multi-layer stack of materials including a light-generating region and a first layer supported by the light-generating region so that, during use of the light-emitting device, light generated by the light-generating region can emerge from the light-emitting device via a surface of the first layer,

wherein the light-emitting device has an edge which is at least about one millimeter long, and the light-emitting device is designed so that a wall plug efficiency of the light-emitting device is substantially independent of the length of the edge of the length of the edge.

59. (New) The light-emitting device of claim 1, wherein the surface of the first layer has features with a size of less than about $\lambda/5$, where λ is a wavelength of light that can be generated by the light-generating region and that can emerge from the light-emitting device via the surface of the first layer.

60. (New) The light-emitting device of claim 27, wherein the surface of the first layer has features with a size of less than about $\lambda/5$, where λ is a wavelength of light that can be generated by the light-generating region and that can emerge from the light-emitting device via the surface of the first layer.

61. (New) The light-emitting device of claim 57, wherein the surface of the first layer has features with a size of less than about $\lambda/5$, where λ is a wavelength of light that can be generated by the light-generating region and that can emerge from the light-emitting device via the surface of the first layer.

62. (New) The light-emitting device of claim 58, wherein the surface of the first layer has features with a size of less than about $\lambda/5$, where λ is a wavelength of light that can be generated by the light-generating region and that can emerge from the light-emitting device via the surface of the first layer.